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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
10/800,121	03/12/2004	William L. Grouell	SUNMP355	9094
32291	7590 09/06/2006		EXAMINER	
MARTINE PENILLA & GENCARELLA, LLP			HARRIS, ANTON B	
710 LAKEW	AY DRIVE		·	
SUITE 200			ART UNIT	PAPER NUMBER
SUNNYVAL	.E, CA 94085	2831		
			DATE MAILED: 09/06/2006	6

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)	
Office Action Summer		10/800,121	GROUELL ET AL.	
	Office Action Summary	Examiner	Art Unit	
		Anton B. Harris	2831	
Period fo	The MAILING DATE of this communication or Reply	appears on the cover sheet w	ith the correspondence address	
WHIC - External after - If NC - Failu Any	ORTENED STATUTORY PERIOD FOR RECHEVER IS LONGER, FROM THE MAILING asions of time may be available under the provisions of 37 CF SIX (6) MONTHS from the mailing date of this communication period for reply is specified above, the maximum statutory per to reply within the set or extended period for reply will, by steply received by the Office later than three months after the need patent term adjustment. See 37 CFR 1.704(b).	G DATE OF THIS COMMUNI R 1.136(a). In no event, however, may a t. eriod will apply and will expire SIX (6) MON tatute, cause the application to become Al	CATION. reply be timely filed  NTHS from the mailing date of this communicati BANDONED (35 U.S.C. § 133).	
Status				
1)[\inf	Responsive to communication(s) filed on 1	7 March 2006		
/=		This action is non-final.	•	
	Since this application is in condition for allo		ters, prosecution as to the merits	is
,	closed in accordance with the practice und	·	•	
Dispositi	on of Claims	•		
4)⊠	Claim(s) 1-28 is/are pending in the application	tion		
	4a) Of the above claim(s) is/are with	~		
	Claim(s) is/are allowed.		•	
·	Claim(s) 1-28 is/are rejected.			
	Claim(s) is/are objected to.			
	Claim(s) are subject to restriction ar	nd/or election requirement.		
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-	The specification is objected to by the Exan		hu tha Evenian	
10)	The drawing(s) filed on is/are: a)			
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11)	Replacement drawing sheet(s) including the countries of the oath or declaration is objected to by the		• • •	(a).
		e Examiner. Note the attached	Office Action of form P10-152.	
_	nder 35 U.S.C. § 119			
_	Acknowledgment is made of a claim for fore	eign priority under 35 U.S.C. §	119(a)-(d) or (f).	
a)[	☐ All b)☐ Some * c)☐ None of:			
	1. Certified copies of the priority docum			
	2. Certified copies of the priority docum			
	3. Copies of the certified copies of the p	•	received in this National Stage	
• 0	application from the International Bu	• • • • • • • • • • • • • • • • • • • •		
- 5	ee the attached detailed Office action for a	list of the certified copies not	received.	
Attachmen				
	e of References Cited (PTO-892) e of Draftsperson's Patent Drawing Review (PTO-948)		Summary (PTO-413) s)/Mail Date	
	nation Disclosure Statement(s) (PTO-1449 or PTO/SB	/08) 5) 🔲 Notice of I	nformal Patent Application (PTO-152)	
	No(s)/Mail Date	6) Other:	<u> </u>	

#### **DETAILED ACTION**

## Claim Rejections - 35 USC § 103

- 1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
- 3. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Babin (6,411,517) in view of Kurek, III (6,394,509).

Regarding claim 1, Babin (abstract) discloses a component mounting device, comprising: a component collar 28;

a component mounting frame 24 configured to receive the component collar 28 and configured to enable movement of the component 54 collar in at least two substantially perpendicular directions (col. 6, lines 17-27) to actively enable the component 54, but lacks a clocked gear assembly coupled to the component mounting frame.

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Kurek, III (abstract) teaches a clocked gear assembly 42 coupled to the component mounting frame 32.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Babin by providing a clocked gear assembly coupled to the component mounting frame in order to move the disk dive in view of the teachings of Kurek, III.

Regarding claim 2, Babin (abstract) discloses the invention substantially as claimed including a lever 40 that enables movement in the vertical and horizontal directions, but lacks a vertical rack gear on the component collar; a horizontal rack gear on the component collar; a vertical clocked gear 14, 16 in the clocked gear assembly; a horizontal clocked gear (near 44) in the clocked gear assembly; and a lever, wherein the vertical rack gear meshes with the vertical clocked gear.

Kurek, III (abstract) teaches a vertical rack gear 42 on the component collar; a horizontal rack gear 42 on the component collar (near 14, 16), a vertical clocked gear 14, 16 in the clocked gear assembly 44; a horizontal clocked gear (near 44) in the clocked gear assembly; and a lever 40, wherein the vertical rack gear 42 meshes with the vertical clocked gear 14, 16.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Babin by providing a clocked gear assembly coupled to the component mounting frame in order to move the disk dive in view of the teachings of Kurek, III.

Furthermore, the limitation of "for controlling the vertical clocked gear and the horizontal clocked gear" in claim 2 has been considered, but does not result in a structural difference. It has

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been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Regarding claim 3, the teachings of Kurek, III further include a movement in the first direction and in the second direction is accomplished by movement of the lever 40 along an arc (see figure 3).

Regarding claim 4, the teachings of Kurek, III further include that the lever 40 includes a first pin 22 to engage the vertical clocked gear 14, 16, the vertical clocked gear 14, 16 having a first slot, and the lever includes a second pin to engage the horizontal clocked gear horizontal clocked gear (near 44), the horizontal clocked gear (near 44) having a second slot.

Furthermore, the limitations of "for receiving the first pin" and "for receiving the second pin" in claim 4 have been considered, but do not result in a structural difference. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Regarding claim 5, the teachings of Kurek, III further include that movement of the lever 40 through a first segment of the arc causes the first pin 22 to engage the first slot to move the vertical clocked gear 14, 16 and movement of the lever 40 through a second segment of the arc causes the second pin 41 to engage the second slot to move the horizontal clocked gear (near 44).

Regarding claim 6, the teachings of Kurek, III further include that the first pin 22 disengages from the first slot and the second pin 41 engages the second slot at a cross-over point.

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Regarding claim 7, the teachings of Kurek, III further include that the arc (see figure 3) is defined by approximately 90 degrees, the first segment being defined by approximately 45 degrees and the second segment being defined by approximately 45 degrees.

Regarding claim 8, the teachings of Kurek, III further include that movement of the component 12 in a first direction is configured to enable insertion of the component device into an array of component devices and movement of the component 12 in a second direction is configured to enable connection of the component to a board connector.

Regarding claim 9, Babin (abstract) discloses a component mounting device comprising: a component collar 28, a component mounting frame 24 configured to receive the component collar, the assembly configured to enable movement of the component collar 28 in a first direction upon initial engagement with the component mounting frame 24 and movement of the component collar 28 in a second direction upon release, but lacks a clocked gear assembly coupled to the component mounting frame.

Kurek, III (abstract) teaches a clocked gear assembly 42 coupled to the component mounting frame 32.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Babin by providing a clocked gear assembly coupled to the component mounting frame in order to move the disk dive in view of the teachings of Kurek, III.

Furthermore, the limitation of "for holding a component" in claim 9 has been considered, but does not result in a structural difference. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the

claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

Regarding claim 10, the teachings of Kurek, III further include that the clocked gear assembly 42 is further configured to enable movement of the component collar 12 in the first direction upon release of the clocked gear assembly 42 by the second rack gear of the component mounting frame 32, and engagement of the first rack gear to the clocked gear assembly 42.

Regarding claim 11, the teachings of Kurek, III further include that the component mounting frame 32 comprises a track 43, the track guiding 43 the component collar 12 during movement of the component collar 12 in the first direction and guiding the component collar 12 during movement of the component collar 12 in the second direction.

Furthermore, the limitation of "for engaging the component collar" in claim 11 has been considered, but does not result in a structural difference. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Regarding claim 12, the teachings of Kurek, III further include that movement of the component collar 12 in the second direction is configured to enable connection of the component 12 to a board connector.

Regarding claim 13, the teachings of Kurek, III further include that movement of the component collar 12 in the first direction is configured to enable insertion of the component 12 into an array of components and is further configured to enable extraction of the component from an array of components 12.

Regarding claim 14, Babin (abstract) discloses a computer component mounting device comprising:

a computer component 54 disposed in a component collar 28,

a component mounting frame 24 configured to receive the component collar 28 and enables movement of the computer component 54 in each of a first direction and a second direction, and the second direction is substantially perpendicular to the first direction (col. 6, lines 17-27), but lacks a clocked gear assembly.

Kurek, III (abstract) teaches a clocked gear assembly 42.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Babin by providing a clocked gear assembly in order to move the disk dive in view of the teachings of Kurek, III.

Furthermore, the limitations of "for positioning the computer component in the first direction" and "for positioning the computer component in the second direction" in claim 14 have been considered, but do not result in a structural difference. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Regarding claim 15, the teachings of Kurek, III further include that the clocked gear assembly 42 includes:

a vertical clocked gear 14, 16;

a horizontal clocked gear (near 44); and a lever 40 and the horizontal clocked gear (near 44), wherein the vertical clocked gear 14, 16 and the horizontal clocked gear (near 44) are

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independently actuated by movement of the lever 40, the lever 40 having a first pin 22 configured to engage a first slot 43 on the vertical clocked gear 14, 16 and the lever 40 further having a second pin 41 configured to engage a second slot on the horizontal clocked gear (near 44).

Furthermore, the limitation of "for controlling the vertical clocked gear" in claim 15 has been considered, but does not result in a structural difference. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Regarding claim 16, the teachings of Kurek, III further include that positioning the computer component 54 in the first direction and in the second direction is accomplished by movement of the lever 40 in through a single arc.

Regarding claim 17, the teachings of Kurek, III further include that the movement of the lever 40 through a first arc segment causes the first pin 22 to engage the first slot 43 to move the vertical clocked gear 14, 16, and movement of the lever 40 through a second arc segment causes the second pin 41 to engage the second slot to move the horizontal clocked gear (near 44).

Regarding claim 18, Babin (abstract) discloses a computer device carrier system, comprising:

a carrier blade capable of receiving a plurality of computer devices 54 and further configured to arrange the plurality of computer devices 54 in at least one array of computer devices 54; a computer device frame 24 attached to the carrier blade, the computer device frame providing positioning and support and capable of positioning the computer device in each of a first

direction and a second direction wherein the second direction is substantially perpendicular to the first direction (col. 6, lines 17-27), and a computer device collar 28 coupled to the computer device, the computer device collar 28 configured to be received by the computer device frame 24 to position and support the computer device, but lacks a clocked gear assembly.

Kurek, III (abstract) teaches a clocked gear assembly 42.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Babin by providing a clocked gear assembly in order to move the disk dive in view of the teachings of Kurek, III.

Furthermore, the limitation of "for a computer device" in claim 18 has been considered, but does not result in a structural difference. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

Regarding claim 19, the teachings of Kurek, III further include that the clocked gear assembly 42 includes: a vertical clocked gear 14, 16; a horizontal clocked gear (near 44); and a lever 40, and the horizontal clocked gear (near 44), wherein the vertical clocked gear 14, 16 and the horizontal clocked gear (near 44) are independently actuated by movement of the lever 40, the lever 40 having a first pin 22 configured to engage a first slot 43 on the vertical clocked gear 14, 16, and a second pin 41 configured to engage a second slot on the horizontal clocked gear (near 44), and movement of the lever 40 through a first arc causes the first pin 22 to engage the first slot 43 to move the vertical clocked gear 14, 16 and movement of the lever 40 through a second arc causes the

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second pin 41 to engage the second slot to move the horizontal clocked gear (near 44), and a cross-over point being defined when the first pin 22 disengages from the first slot 43 and the second pin 41 engages the second slot.

Furthermore, the limitation of "for controlling the vertical clocked gear" in claim 19 has been considered, but does not result in a structural difference. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Regarding claim 20, Babin (abstract) discloses a storage array carrier system, comprising: a carrier blade capable of receiving a plurality of storage devices 54 and arranging the plurality of storage devices 54 in a plurality of linear arrays; a storage device frame 24 attached to the carrier blade to position and to secure a storage device, the storage device frame 24 and enables movement of the storage device 54 in at least two substantially perpendicular directions (col. 6, lines 17-27); and a device collar 28 coupled to the storage device 54, the device collar 28 capable of being received in a track 26 of the storage device frame 24, the device collar 28 configured to mesh with the clocked gear assembly (near 44) to position the storage device 54 and to connect the storage device 54.to, and disconnect the storage device 54 from, a power and data connection, but lacks a clocked gear assembly.

Kurek, III (abstract) teaches a clocked gear assembly 42.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Babin by providing a clocked gear assembly in order to move the disk dive in view of the teachings of Kurek, III.

Regarding claim 21, the teachings of Kurek, III further include that the clocked gear assembly (near 44) includes:

a vertical clocked gear 14, 16; a horizontal clocked gear (near 44); and a lever 40, wherein the vertical clocked gear 14, 16 and the horizontal clocked gear (near 44) are independently actuated by movement of the lever 40 to mesh with each of a vertical rack gear 44 of the device collar and a horizontal rack gear of the device collar 28.

Furthermore, the limitation of "for controlling the vertical clocked gear and the horizontal clocked gear" and "for inserting the storage device into and removing the storage device from a location in one of the plurality of linear arrays of storage devices without one of connecting and disconnecting another storage device" in claim 21 have been considered, but do not result in a structural difference. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Regarding claim 22, Babin (abstract) discloses a 22 an apparatus comprising: a collar 28, but lacks a first gear positioned on the collar; and a second gear positioned on the collar and proximate to the first gear.

Kurek, III (abstract) teaches a first gear 42 positioned on the collar; and a second gear (see figure 3) positioned on the collar and proximate to the first gear 42.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Babin by providing a first gear positioned on the

collar; and a second gear positioned on the collar and proximate to the first gear in order to move the disk dive in view of the teachings of Kurek, III.

Furthermore, the limitation of "the first and the second gears are configured for engaging corresponding portions of a receiving mechanism" in claim 22 has been considered, but does not result in a structural difference. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Regarding claim 23, the teachings of Kurek, III further include that the first gear 42 comprises a first plurality of linearly arranged gear teeth 26; and the second gear (see figure 3) comprises a second plurality of linearly arranged gear teeth 26.

Regarding claim 24, the teachings of Kurek, III further include that the first plurality of linearly arranged gear teeth 26 is substantially perpendicular to the second plurality of linearly arranged gear teeth 26.

Regarding claim 25, the teachings of Kurek, III further include that the first plurality of linearly arranged gear teeth 26 is not co-planer with the second plurality of linearly arranged gear teeth 26.

Regarding claim 26, the teachings of Kurek, III further include that the first gear 42 defines a first plane and the second gear (see figure 3) defines a second plane, different from the first plane, and offset in a first direction perpendicular to the first and second planes.

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Regarding claim 27, the teachings of Kurek, III further include that a number of gear teeth 26 on the first gear 42 is equal to a number of gear teeth 26 on the second gear (see figure 3).

Regarding claim 28, the teachings of Kurek, III further include a means for coupling the collar 12 to a component.

## Response to Arguments

4. Applicant's arguments filed 17 March 2006 have been fully considered but they are not persuasive.

In response to Applicant's argument regarding claim 1 and its depending claims 2-8 and claim 14 and its depending claims 15-17 that the prior art does not disclose a clocked gear assembly and movement of the component collar in at least two substantially perpendicular directions, Examiner disagrees. Babin (col. 6, lines 17-27) discloses movement of the component 54 collar in at least two substantially perpendicular directions and Kurek, III (abstract) teaches a clocked gear assembly 42 coupled to the component mounting frame 32.

Furthermore, the limitation of "a component mounting frame configured to receive the component collar" and "configured to enable movement of the component collar in at least two substantially perpendicular directions to actively enable the component" do not result in a structural difference. A recitation that an element is "configured to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. Therefore, the rejection is maintained.

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In response to Applicant's argument regarding claim 9 and its depending claims 10-13 that the prior art does not disclose that the clocked gear assembly is configured to enable movement of the component collar in a first direction upon initial engagement with the component mounting frame and movement of the component collar in a second direction upon release, Examiner disagrees. Kurek, III teaches a pair of pinions (clocked gears) 42, 142 that enable movement of the component collar 28 in a first direction upon initial engagement with the component mounting frame 24 and movement of the component collar 28 in a second direction.

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Furthermore, the limitation of "clocked gear assembly is configured to enable movement of the component collar in a first direction upon initial engagement with the component mounting frame and movement of the component collar in a second direction upon release" do not result in a structural difference. A recitation that an element is "configured to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. Therefore, the rejection is maintained.

In response to Applicant's argument regarding claim 18 and its depending claim 19 and claim 20 and its depending claim 21 that the prior art does not disclose that a carrier blade is capable of receiving a plurality of computer devices 54 and further configured to arrange the plurality of computer devices 54 in at least one array of computer devices 54, Examiner disagrees. Babin discloses that a carrier blade is capable of receiving a plurality of computer devices 54 and further configured to arrange the plurality of computer devices 54 in at least one array of computer devices 54.

Furthermore, the limitation of "a carrier blade capable of receiving a plurality of computer devices" does not result in a structural difference. A recitation that an element is "can

capable of" performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

Also, the limitation of "configured to arrange the plurality of computer devices in at least one array of computer devices" does not result in a structural difference. A recitation that an element is "configured to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. Examiner submits that the rejection supported by the prior art is capable of and configured to perform the claimed functionality. Therefore, the rejection is maintained.

In response to Applicant's argument regarding claim 22 and its depending claims 23-28 that the prior art does not disclose that a first gear and a second gear positioned on the collar and proximate to the first gear, Examiner disagrees. Kurek, III teaches a first gear 42 and a second gear (see figure 3) positioned on the collar and proximate to the first gear 42. Examiner interprets figure 3 of Kurek, III as showing the two gears as being proximate.

#### Conclusion

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anton B Harris whose telephone number is (571) 272-1976. The examiner can normally be reached on weekdays from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Dean Reichard, can be reached on (571) 272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

abh 8/30/06

> Dean A. Heichard / Supervisory patent examiner

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